In the Claims

1. (Previously Presented) A system, comprising:

a control card, comprising:

a control processor to execute a control portion of an exterior gateway protocol; and

a routing table of exterior gateway routes and devices;

a line card, comprising:

a line processor to execute an offload portion of an exterior gateway protocol; and

a communications port to allow termination of at least one communication link; and

a backplane to allow the control card and the line card to communicate, wherein the line card is configured to filter mal-formed, illegal and duplicate update messages from gateway peers.

2. (Original) The network device of claim 1, the control processor further comprising a general-purpose processor.

3. (Original) The network device of claim 1, the control processor further comprising an Intel Architecture processor.

4. (Original) The network device of claim 1, the line processor further comprising a network-enabled processor.

5. (Original) The network device of claim 1, the line processor further comprising an Intel IXP processor.

6. (Original) The network device of claim 1, the backplane further comprising a physical backplane connection.

7. (Original) The network device of claim 1, the backplane further comprising a network.

8. (Previously Presented) A method of processing an exterior gateway protocol packet, comprising:

receiving an incoming packet at a line-card;

determining if the packet is valid;

parsing the packet to extract protocol data;

transmitting any control-relevant data to a control card; and

generating message traffic at the line card for peer gateways including announcing routes to the peer gateways.

9. (Previously Presented) The method of claim 8, receiving the incoming packet at the line-card further comprising receiving a packet through the Transmission Control Protocol.

10. (Original) The method of claim 8, determining if the packet is valid further comprising determining if the packet is a mal-formed packet.

11. (Original) The method of claim 8, determining if the packet is valid further comprising applying a packet filter to the packets.

12. (Original) The method of claim 8, determining if the packet is valid further comprising applying an address filter to the packets.

13. (Previously Presented) The method of claim 8, transmitting any control-relevant data to a control card further comprising transmitting data related to valid updates from the peer gateways.

14. (Original) The method of claim 8, parsing the packet to extract protocol data further comprising decrypting encrypted packets.

15. (Original) The method of claim 8, generating message traffic for peer gateways further comprising generating responses required by the incoming packets.

16. (Canceled)

17. (Original) The method of claim 8, generating message traffic for peer gateways further comprising encrypting messages for peer gateways that require encryption.

18. (Previously Presented) A method of establishing an offload portion of a distributed exterior gateway protocol, comprising:

initializing a line card;

registering an offload portion of a protocol to be executed by the line card with a central registration point;

setup a control connection with a control card;

transmit data resource data to the control card;

receiving configuration information from the control card;

establishing connections with exterior gateway peers;

performing Border Gateway Protocol functions at the line card, including running output policies for each of the gateway peers; and

transmitting only valid Border Gateway Protocol data to the control card.

19. (Previously Presented) The method of claim 18, registering the offload portion further comprising registering with a distributed control plane architecture infrastructure module.

20. (Original) The method of claim 18, performing Border Gateway Protocol functions further comprising parsing and validating incoming packets.

21. (Previously Presented) The method of claim 18, performing Border Gateway Protocol functions further comprising filtering mal-formed, illegal and duplicate update messages from the gateway peers.

22. (Original) The method of claim 18, performing Border Gateway Protocol functions further comprising caching a routing table received from the control card.

23. (Canceled)

24. (Original) The method of claim 18, performing Border Gateway Protocol functions further comprising encrypting and decrypting packets as necessary.

25. (Previously Presented) A method of establishing a control portion of a distributed exterior gateway protocol, comprising:

initializing a control card;

registering a control portion of a protocol to be executed by the control card with a central registration point;

setting up control connections with line cards executing offload portions of the protocol;

configuring the line cards including providing a routing table and policy data to each line card; and

performing central Border Gateway Protocol functions.

26. (Canceled)

27. (Original) The method of claim 25, registering a control portion of a protocol to be executed further comprising registering the control portion with a distributed control plane architecture infrastructure module.

28. (Original) The method of claim 25, performing central Border Gateway Protocol functions further comprising processing valid updates from the line cards and adjusting the routing table as needed.

29. (Previously Presented) The method of claim 25, performing central Border Gateway Protocol functions further comprising providing an updated routing table to each line card.

30. (Previously Presented) An article of machine-readable code containing instructions that, when executed, cause the machine to:

receive an incoming packet at a line-card;

determine if the packet is valid;

parse the packet to extract protocol data;

transmit any control-relevant data to a control card; and

generate message traffic for peer gateways including announcing routes to the peer gateways.

31. (Previously Presented) The article of claim 30, the instructions causing the machine to receive the incoming packet at a line-card further cause the machine to receive a packet through the Transmission Control Protocol.

32. (Original) The article of claim 30, the instructions causing the machine to determine if the packet is valid further causes the machine to determine if the packet is a mal-formed packet.

33. (Original) The article of claim 30, the instructions causing the machine to determine if the packet is valid further causes the machine to apply a packet filter to the packet.

34. (Original) The article of claim 30, the instructions causing the machine to determine if the packet is valid further causes the machine to apply an address filter to the packet.